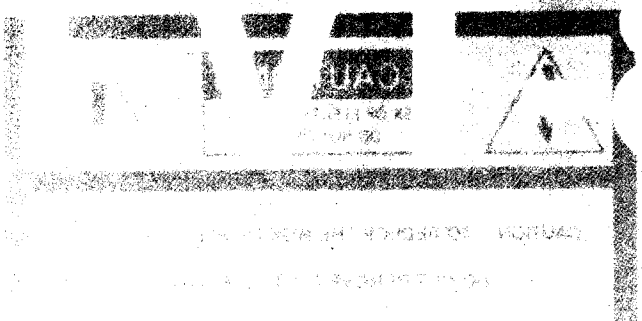
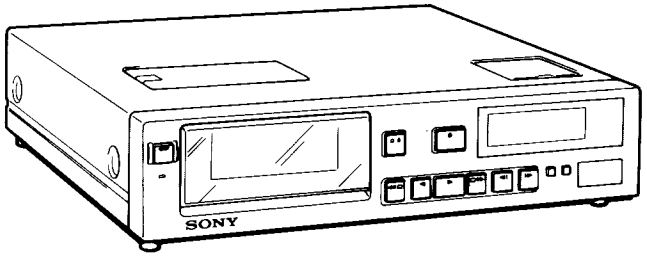


OPERATING INSTRUCTIONS page 2

Before operating the unit, please read this manual thoroughly and retain it for future reference.

MODE D'EMPLOI page 22

Avant la mise en service de cet appareil, lire attentivement ce mode d'emploi et le conserver pour toute référence ultérieure.



WatchCorder

©1987 by Sony Corporation

English

OWNER'S RECORD

The model and serial number of your set are located on the rear. Record the serial number in the space provided below. Refer to these numbers whenever you call upon your Sony dealer regarding this product.

Model No. EVT-801 Serial No. _____

Warning 2
Precautions 3
Outline 3
Location and function of controls 4

PREPARATION

Connections 8
Setting the date and time 9
Inserting the cassette 10
Selecting the recording time 11

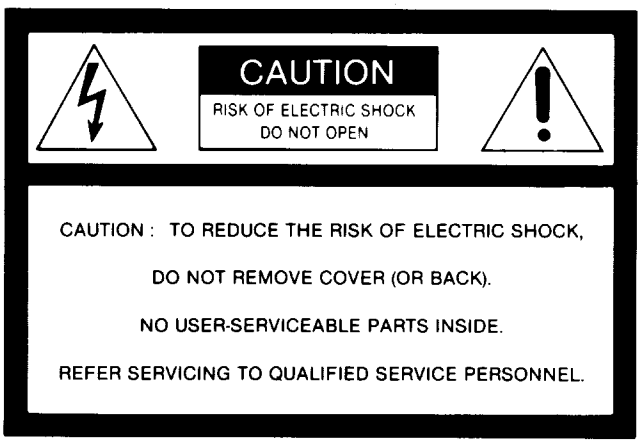
OPERATION

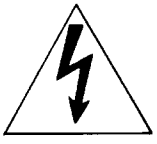
Recording 12
REC LOCK function 13
Repeated recording on the same cassette 13
Automatic recording restart after a power failure 13
Alarm recording 14
Timer recording 15
Playback 16
Various playback functions 17
Maintenance 18
Specifications 19
Troubleshooting 20

CAUTION
The format used in the time lapse recorder EVT-801 differs from the regular 8 mm video format. This unit cannot be used to play 8 mm video cassettes. However, cassettes recorded on this unit may be viewed on a normal 8 mm video cassette recorder.

WARNING

To prevent fire or shock hazard, do not expose the unit to rain or moisture.


CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN
CAUTION : TO REDUCE THE RISK OF ELECTRIC SHOCK,
DO NOT REMOVE COVER (OR BACK).
NO USER-SERVICEABLE PARTS INSIDE.
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.



This symbol is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

INFORMATION

This equipment generates and uses radio frequency energy and if not installed and used properly, that is, in strict accordance with the manufacturer's instructions, may cause interference to radio and television reception. It has been type tested and found to comply with the limits for a Class B computing device in accordance with the specifications in Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference in a residential installation. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

Reorient the receiving antenna
Relocate the equipment with respect to the receiver
Move the equipment away from the receiver
Plug the equipment into a different outlet so that equipment and receiver are on different branch circuits.

If necessary, the user should consult the dealer or an experienced radio/television technician for additional suggestions. The user may find the following booklet prepared by the Federal Communications Commission helpful:

"How to Identify and Resolve Radio-TV Interference Problems". This booklet is available from the U.S. Government Printing Office, Washington, DC 20402, Stock No. 004-000-00345-4.

On safety
- Operate the unit only on 120 V AC, 60 Hz.
- Should any solid object or liquid enter the cabinet, unplug the unit and have it checked by qualified personnel before operating it any further.
- Unplug the unit from the wall outlet if it is not to be used for an extended period of time. To disconnect the cord, pull it out by the plug. Never pull the cord itself.

On installation
- Allow adequate air circulation to prevent internal heat build-up. Do not place the unit on surfaces (rugs, blankets, etc.) or near materials (curtains, draperies) that may block the ventilation slots.
- Do not install the unit near heat sources such as radiators or air ducts or in a place subject to direct sunlight, excessive dust, mechanical vibration or shock.
- The unit is designed for operation in a horizontal position. Do not install it in an inclined position.
- Keep the unit and cassette tapes away from equipment with strong magnets, such as a microwave oven or large loudspeaker.
- Do not place any heavy object (more than 13 kg, 28 lbs) on the unit.

On operation
- When the unit is not in use, turn the power off to conserve energy and to extend its useful life.
- Remove and store video cassettes after recording or playback.

On cleaning
Clean the cabinet, panel and controls with a dry soft cloth, or a soft cloth lightly moistened with a mild detergent solution. Do not use any type of solvent, such as alcohol or benzine, which might damage the finish.

On repacking
Do not throw away the carton and packing materials. They make an ideal container in which to transport the unit. When shipping the unit to another location, repack it as illustrated on the carton.

On cassette care
Store cassettes in their cases and keep them in an upright position to prevent intrusion of dust and uneven winding.

If you have any questions about this unit, contact your Sony dealer.

Still picture with optimum resolution
High-band technology improves horizontal resolution to more than 380 lines, and frame freeze doubles vertical resolution in comparison to field freeze. The resulting picture quality is truly outstanding. Even minute details remain clearly discernible.

Six time lapse modes
The time lapse intervals for recording can be set in six steps, from 1 frame per 1/4 second to 1 frame per 8 seconds. At the longest interval setting, available recording time is a full 384 hours (16 days) with one 90-minute tape.

Field still picture with digital memory
For clear and unblurred viewing of fast-moving objects, single fields stored in digital memory can be displayed.

Versatile recording functions
- Alarm recording — Automatic recording at shortest time mode setting when alarm sensor is activated.
- Timer recording — Automatic start of recording when power is supplied from an external timer.
- Repeat recording — Automatic rewind at tape end, and recording restart at tape beginning.

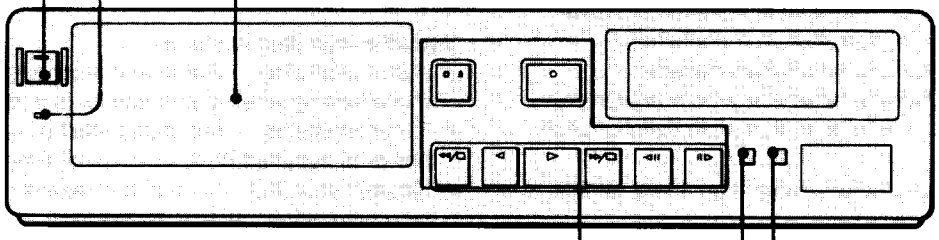
Time/date generator
Time and date information, which is invaluable for surveillance and monitoring purposes, can be recorded together with the picture.

Informative display with tape counter
The recording condition and other settings can be checked at a glance on the easy-to-read display. The REC indicator flashes in the same interval as the selected time mode, and the ALARM indicator alerts of any alarm sensor operation.

Power failure backup and automatic recording restart
Time and date settings are retained for up to 72 hours even in the case of a power interruption. When power is restored, recording automatically continues in the previously selected mode.

REC LOCK function
To guard against operation errors, the record mode can be locked, so that recording is not interrupted even if a button is accidentally pressed.

FRONT PANEL AND TOP COVER



POWER switch and indicator

EJECT indicator
Lights up while a cassette is being ejected.

Cassette holder

Tape operation buttons

STOP/EJECT ■/⏏ button

REC ● (record) button
To start recording, press this button and the ▶ button.

REW ◀◀/⏮ (rewind) button
Pressing the button during playback permits review (rewind while viewing the picture).

REV ◀ (reverse) button

FWD ▶ (forward) button

FF ▶▶/⏭ (fast-forward) button
Pressing the button during playback permits cueing (fast-forward while viewing the picture).

STILL/FRAME ◀II button
Press the button once to view a still picture. Each subsequent push then switches the picture back by one frame. If the field mode was chosen with the FRAME/FIELD button, the picture moves by one field.

STILL/FRAME II▶ button
Press the button once to view a still picture. Each subsequent push then advances the picture by one frame. If the field mode was chosen with the FRAME/FIELD button, the picture moves by one field.

FRAME/FIELD button
Serves to select the still picture playback mode.
Each push cycles the setting through Field 1, Field 2, and Frame.

COUNTER RESET button

PB SPEED swtich
Toggles the unit between regular playback speed and the speed shown by the TIME MODE indicator.

EXT TIMER REC (external timer recording) switch
Set to ON if recording is to be started by an external timer.

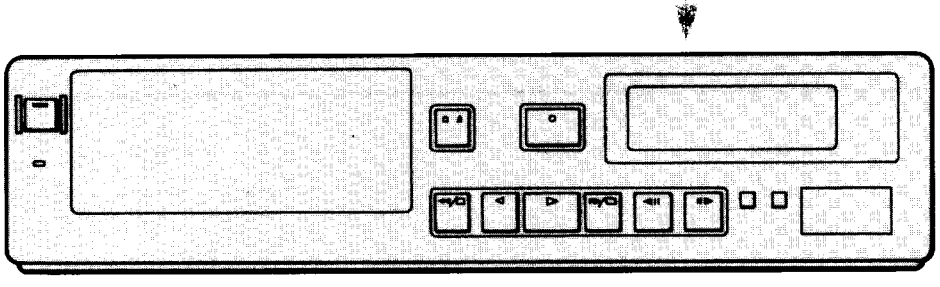
TIME MODE button
Selects the recording time mode (interval setting).
Each push cycles the setting through 12 H, 24 H, 48 H, 96 H, 192 H, 384 H (see page 11).

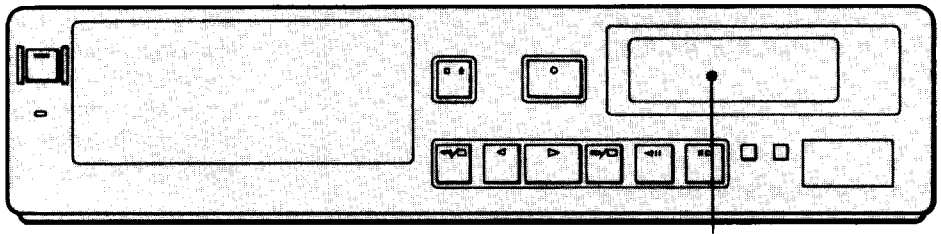
TIME DATE GENERATOR SET, ADJUST buttons
Serve to set the date and time.

DISPLAY selector
Selects recording and position of time/date display.
R: Lower right of screen
L: Lower left of screen
OFF: No time/date information is displayed.

REPEAT REC switch
Set to ON to use the same cassette for repeated recording. At the tape end, the cassette is automatically rewound and recording restarts from the beginning. Only if the alarm sensor was activated, the tape stops at the tape end.

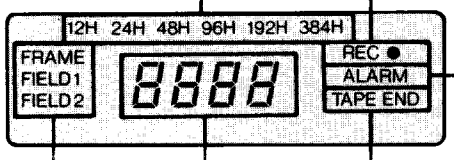
REC LOCK switch
When set to ON, all front-panel buttons are inoperative after recording is started. This serves to prevent operation errors.





Time mode indicator
Shows the recording time when P6-90 tape is used.

REC ● indicator
"REC" lights up during recording and "●" flashes in the same interval as the selected time mode.



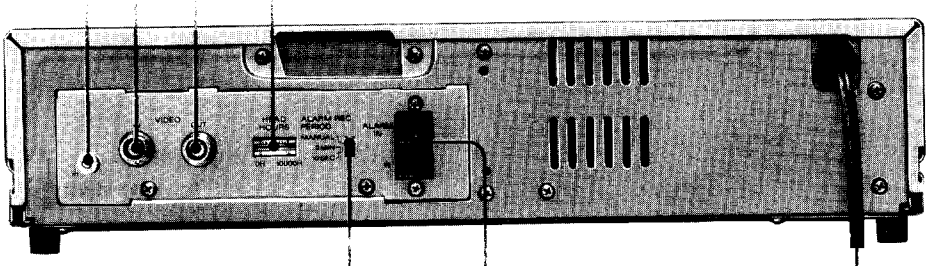
ALARM indicator
Lights up when the alarm sensor has activated in alarm recording.

Still picture mode indicator

Tape counter

TAPE END indicator

REAR PANEL



Ground terminal

VIDEO IN terminal (BNC connector)
Connect to the video output of the video camera.

VIDEO OUT terminal (BNC connector)
Connect to the video input of the monitor. During recording and standby, the signal from the VIDEO IN terminal is routed straight to the output. During playback, the signal from the tape is supplied.

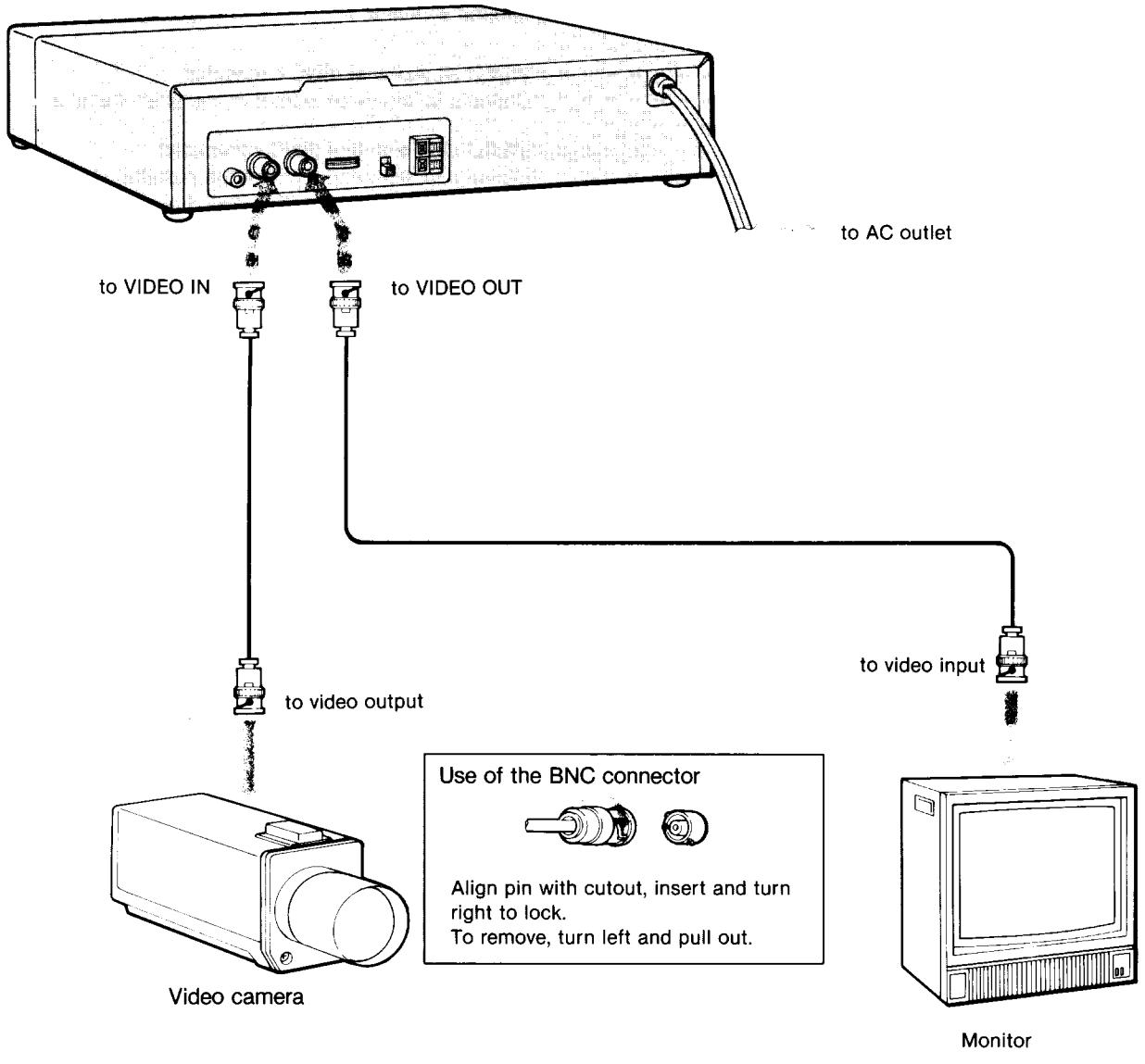
HEAD HOURS meter
Indicates accumulated time of head drum rotation to provide a reference for maintenance.

Power cord

ALARM REC PERIOD selector

ALARM IN and ⏚ (ground) terminals
For alarm sensor connection. When the two terminals are shorted, alarm recording starts (see page 14).

MANUAL	Alarm recording continues for as long as the alarm sensor is ON.
2 MIN	Alarm recording continues for 2 minutes after the alarm sensor was activated.
10 SEC	Alarm recording continues for 10 seconds after the alarm sensor was activated.

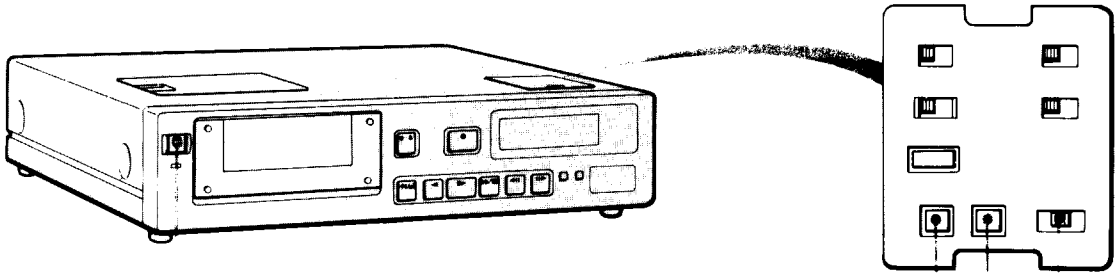

to AC outlet
to VIDEO IN
to VIDEO OUT
to video input
to video output
Use of the BNC connector
Align pin with cutout, insert and turn right to lock.
To remove, turn left and pull out.
Video camera
Monitor

For alarm sensor connection, refer to page 14.

For timer connection, refer to page 15.

Use a black-and-white montior
The high resolution of this time lapse recorder is utilized to best advantage in combination with a black-and-white monitor.
It is therefore recommended to use a black-and-white monitor. The signal recorded on the tape is black-and-white, and the output is also in black-and-white when monitoring the signal from the video camera. If a color monitor must be used, its color adjustment control should be turned fully down (to black-and-white), to prevent color noise during playback.

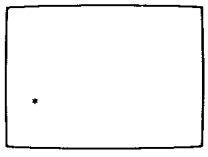
Only the last two digits of the year are shown. Compensation for differing month lengths and leap years is made automatically.



1 3 4 2

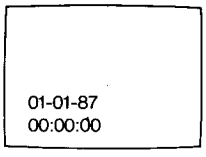
1 **Turn on the camera, monitor and EVT-801.**

2 **Set the DISPLAY selector to "L" or "R".**



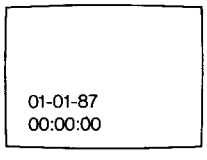
3 **Press the SET button for 3 seconds.**
The item to be set flashes.

During the adjustment, the clock stops.

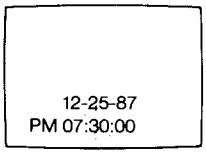


4 **Press the ADJUST button to call up the desired number.**
When no adjustment of that item is necessary, just proceed to the next step.

Number setting Tapping the ADJUST button once advances the number by one count. When the button is kept depressed, the numbers advance continuously.

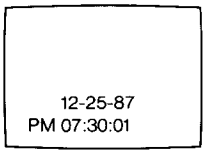


5 **Press the SET button and repeat step 4 until the date, (month, day, year) and time (hour, minute) is correct.**



Setting example: December 25, 1987, 7:30 p.m.

6 **Press SET to enter the setting.**
The clock starts moving from 00 seconds.



To adjust the clock
After setting the DISPLAY selector to "L" or "R", press the SET button for 3 seconds. When the hour indication flashes, enter the new time.

After a power failure
If power was interrupted for less than 72 hours (and the backup battery was fully charged), correct date and time will be maintained. The selected recording mode is also stored, so that recording automatically continues after power is restored.
The internal backup battery is charged while the unit is operating.
For a full charge, the unit must be on for about 40 hours.

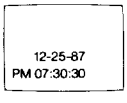
To disable date and time stamping

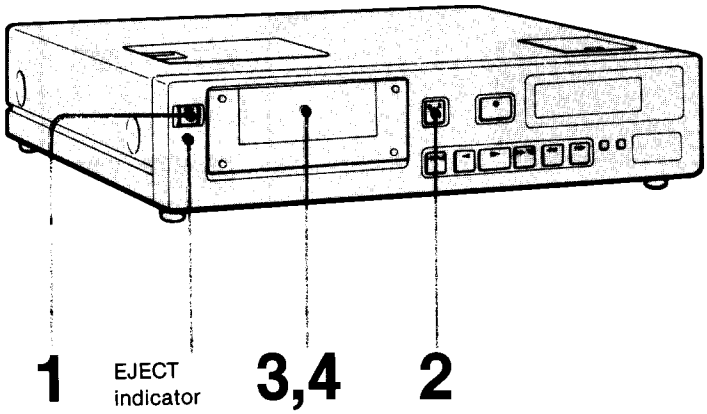
Set the DISPLAY selector to OFF. Date and time information will not be recorded on the tape.

To change the position of the date and time display

Set the DISPLAY selector to "L" for display in the lower left corner or to "R" for the lower right corner.

Example for "L" setting



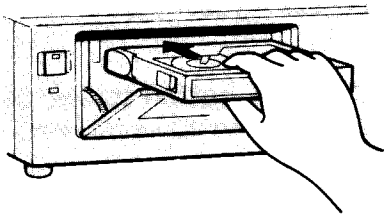


1 Turn on the power.

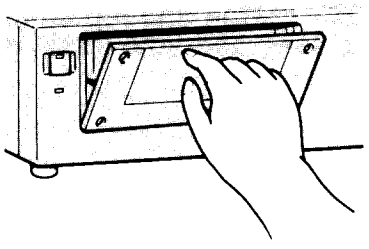
2 Press the ■/⏏ button.

The EJECT indicator lights up. When it goes out, the cassette holder opens.

3 Fully insert the cassette with the tape window side up.



4 Close the cassette holder.



Removing the cassette

1 Turn on the power.
2 Press the ■/⏏ button.
The EJECT indicator lights up. When it goes out, the cassette slides out.
3 Remove the cassette and close the cassette holder.

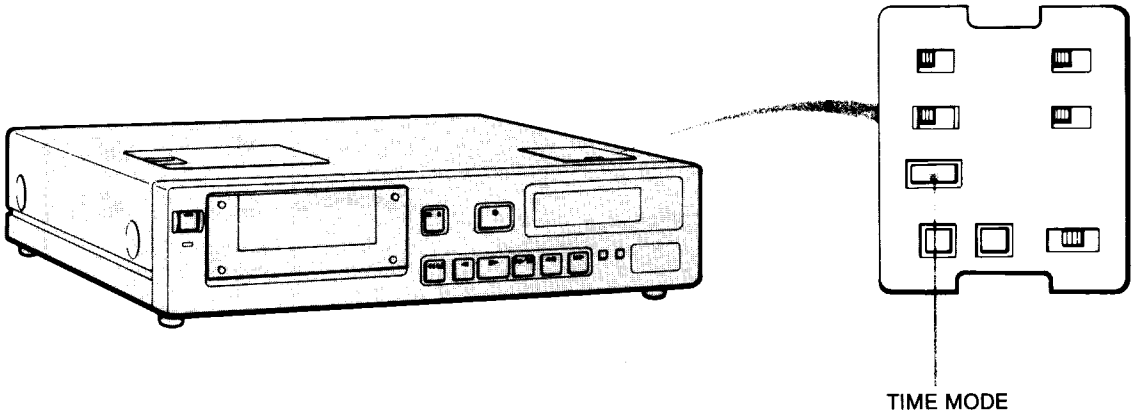
Always insert the cassette correctly, with the window facing up. Video cassettes can only be used on one side.

Record prevention tab

When a recording is made on a cassette, any previous material will be automatically erased. To protect a cassette from accidental erasure, slide the tab on the rear of the cassette to the left, so that the tab window is red.

Tab window red:
recording not possible.

Tab in original position:
recording possible.



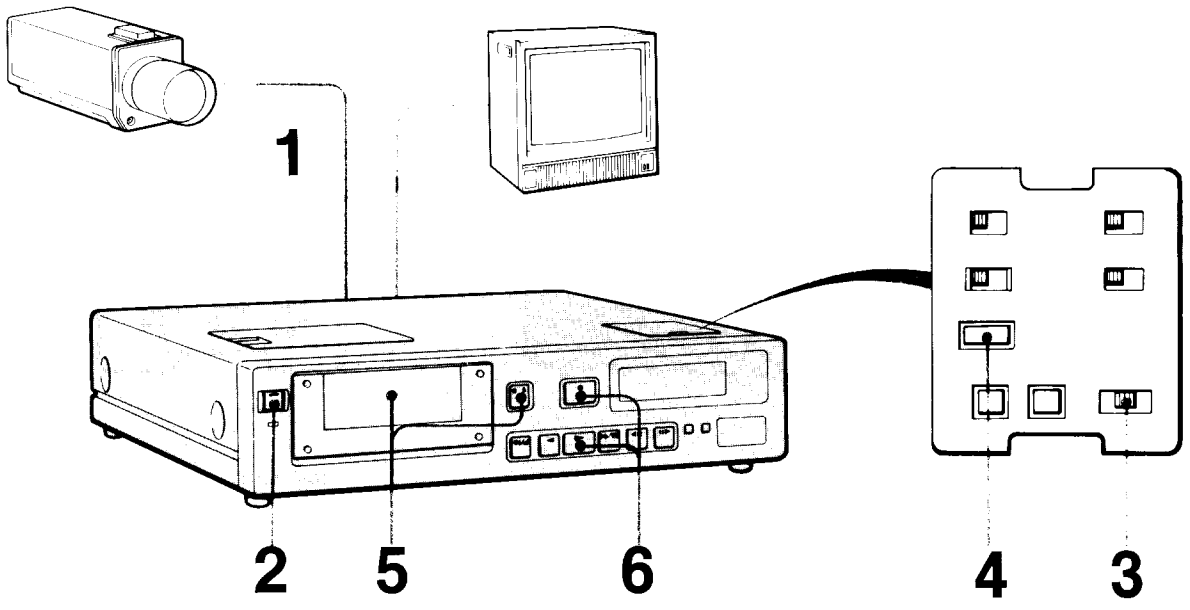
Press the TIME MODE button to select the desired recording time.
Each push of the button cycles the unit through six possible settings.

Recording time and intervals

Time mode indicator	Maximum recording time with 90-minute tape	Interval	Max. recording time for other tapes	
			30-minute tape	60-minute tape
12H	12 hours	approx. 1/4 second	4 hours	8 hours
24H	24 hours	approx. 1/2 second	8 hours	16 hours
48H	48 hours (2 days)	approx. 1 second	16 hours	32 hours
96H	96 hours (4 days)	approx. 2 seconds	32 hours	64 hours
192H	192 hours (8 days)	approx. 4 seconds	64 hours	128 hours
384H	384 hours (16 days)	approx. 8 seconds	128 hours	256 hours

On cassettes
The EVT-801 is designed and calibrated with 90-minute tape (Sony P6-90). To ensure stable operation and optimum picture quality, the use of Sony 90-minute tape is recommended.

The principle of extended recording
The extremely long recording times offered by the EVT-801 are made possible by moving the tape only for small incremental steps while a video picture is recorded.



1 **Turn on the camera and monitor.**

2 **Turn on the EVT-801.**
Confirm that the picture from the camera is shown on the monitor.

3 **If wishing to record the date and time, set the DISPLAY selector to "L" or "R".**
Confirm that the correct date and time is displayed.

4 **Select the recording time with the TIME MODE button.**

5 **Insert the cassette.**

6 **While pressing the ● button, press the ► button.**
Recording starts.

To stop recording,
press the ■/⏏ button.

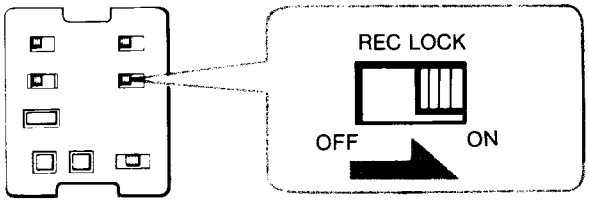
If recording does not start and the cassette holder opens
The record prevention tab is set to prevent recording.
Change the tab setting (see page 10).

When the tape end is reached,
the TAPE END indicator on the display panel lights up and the tape stops. Power to the unit is not switched off automatically.

REC LOCK FUNCTION

Locking the record mode is useful to guard against accidental recording interruptions when the unit is used for surveillance or monitoring purposes.

Selector switch panel



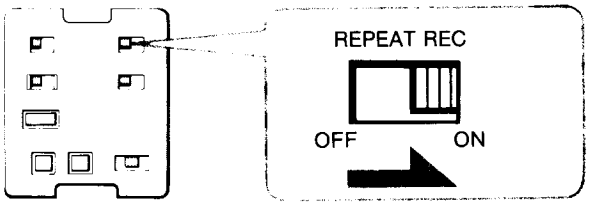
All buttons on the front panel are inoperative.
(The buttons and switches on the selector switch panel can be used normally.)

To stop recording, set the REC LOCK switch to "OFF" and then press the ■/⏏ button.

REPEATED RECORDING ON THE SAME CASSETTE

This function is suitable for applications where the recording is only to be used when something unusal has occurred. Before repeat recording, perform daily check routine (see page 18).

Selector switch panel



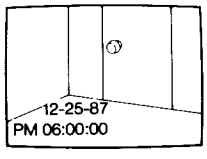
When the tape end is reached, the cassette is rewound and recording starts again from the beginning. If the ■/⏏ button or another transport button was pressed during automatic rewind, repeat recording is not carried out.

If alarm recording was carried out at least once, the tape stops at the tape end.

AUTOMATIC RECORDING RESTART AFTER A POWER FAILURE

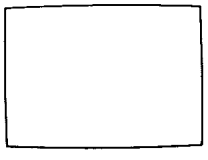
This feature is also useful for example in banks or offices, where power is cut off overnight. Recording will automatically continue when power is switched on in the morning.

Before power failure

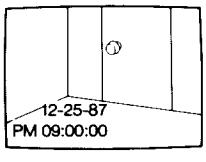


Montior

Power failure



Power is restored after 3 hours.



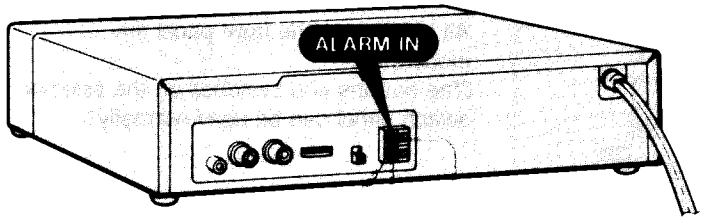
(Recording restarts automatically.)

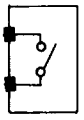
The internal backup battery maintains date and time settings as well as the selected record mode for up to 72 hours. **When power is restored, recording automatically continues in the previously selected mode.**

For full backup battery charge,
the unit must be on for about 40 hours.

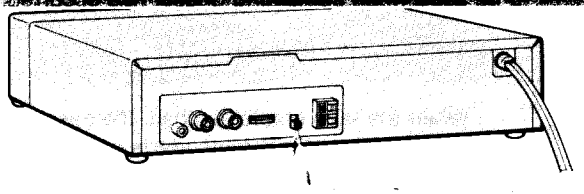
If "*" appears instead of date and time display,
Set the date and time again and charge the backup battery fully.

A door switch or alarm sensor can be used to trigger alarm recording. During alarm recording, the 12-hour (12H) time mode setting is automatically selected, to provide detailed picture information.





Commercially available alarm sensor



ALARM REC PERIOD

MANUAL
2 MIN
10 SEC

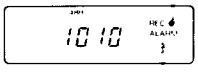
Alarm recording continues:
for as long as sensor is ON.
for 2 minutes after sensor was activated.
for 10 seconds after sensor was activated.

Other recording period settings are also possible. Please consult your Sony dealer for details.

When the alarm sensor is activated, the unit automatically switches to alarm recording in the 12-hour time mode.

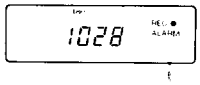
Display during alarm recording

During alarm recording
Flashes in shortest time mode setting.



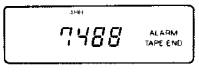
Lights up.

Alarm recording terminated
Regular recording resumes.

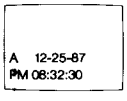


Indicator stays lit to show that alarm recording was carried out.

Recording stops at tape end.



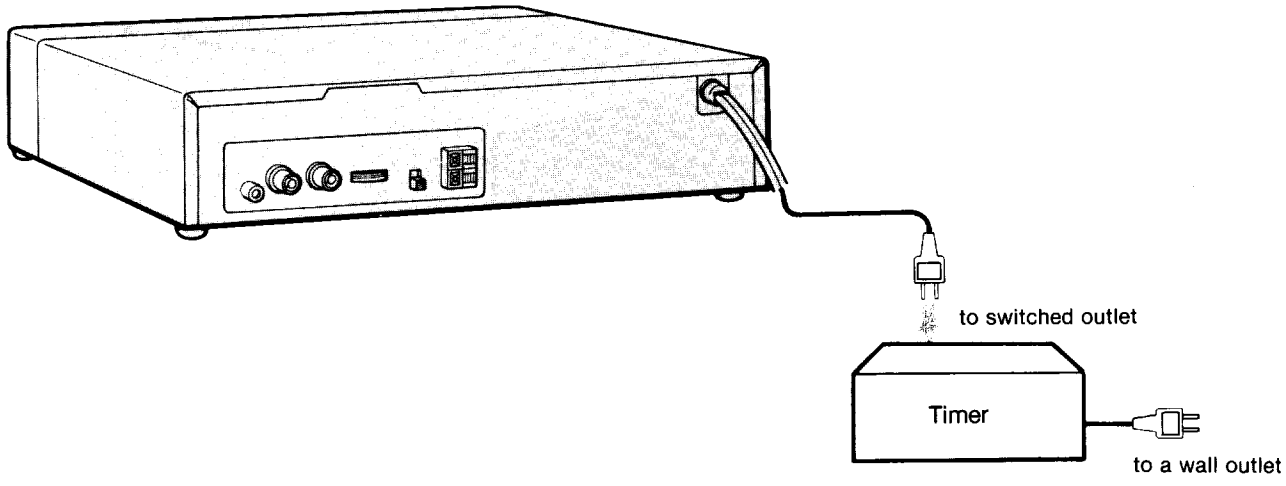
Monitor



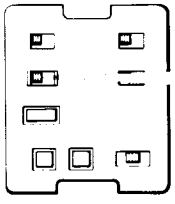
Lights up.
(An "A" is recorded on sections which were taken during alarm recording.)

To remove the ALARM Indication,
press ■/⏏ button and stop the tape.

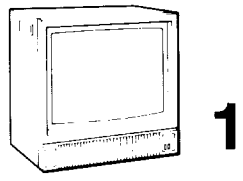
A timer can be used to automatically start recording at a preselected time.

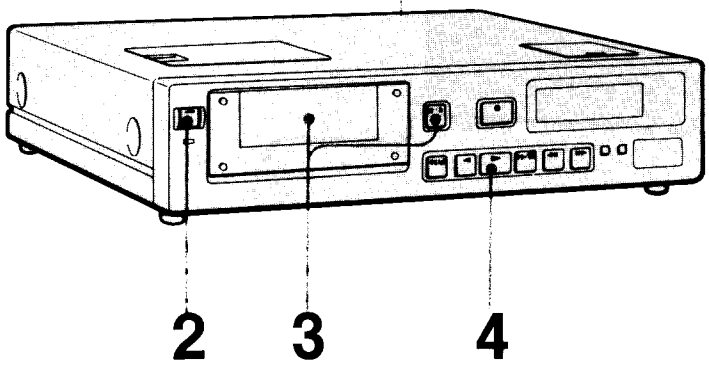


Selector switch panel



Recording starts automatically when power is supplied. Set the desired ON/OFF time at the timer.





1 **Turn on the monitor.**

2 **Turn on the EVT-801.**

3 **Insert the cassette.**

4 **Press the ▶ button.**
Playback starts.

Playback speed
Playback speed corresponds to the SP mode (1.43 cm/s) when the PB SPEED switch is set at STD.

To stop playback,
press the ■/⏏ button.

To rewind the tape,
press the ■/⏏ button and then the ◀◀/⏮ button.

To fast-forward the tape,
press the ■/⏏ button and then the ▶▶/⏭ button.

VARIOUS PLAYBACK FUNCTIONS

To play the tape in reverse direction		Press the ◀ button.
To view a still picture		Press the ◀II or II▶ button.
To view frame-by-frame pictures in succession	in forward direction	Press the II▶ button.
	in reverse direction	Press the ◀II button.
To view field-by-field pictures in succession	in forward direction	Select the Field 1 or Field 2 mode with the FIELD/FRAME button and press the II▶ button.
	in reverse direction	Select the Field 1 or Field 2 mode with the FIELD/FRAME button and press the ◀II button.
To view a tape in fast-forward (Cue)		Press the ▶▶/⏩ button during playback.
To view a tape in rewind (Review)		Press the ◀◀/⏪ button during playback.

- Tapping the ◀II or II▶ button once moves the picture by one frame (or field). Keeping the button depressed causes continuous frame-by-frame (or field-by-field) playback.
- Fast-forward or rewind continues for as long as the ◀◀/⏪ or ▶▶/⏩ button is kept depressed.
- During cue and review, horizontal stripes will appear in the picture.
- During playback in reverse direction, some picture distortion may occur.

Notes on frame-by-frame playback

- Pressing the ◀II button during forward frame-by-frame playback moves the picture back by about 8 frames.
- During continous frame-by-frame playback in the reverse direction, the unit automatically enters the stop mode after about 200 frames, to protect the tape.

Use of the PB SPEED switch (on the selector switch panel)

STD (Standard): Pressing the ▶ button starts play with regular speed.
Pressing the ◀ button starts playback in the reverse direction with regular speed.

SELECT: Pressing the ▶ button starts playback with the speed shown by the time mode indication. (Reverse playback is at regular speed.)
Playback at an appropriate speed is possible by setting the TIME MODE button.

Before starting to record, check the time mode indication and change the setting if necessary.

If the still picture is unstable
Press the FRAME/FIELD button to select Field 1 or Field 2 playback. In the Frame still picture mode, the two fields (spaced by 1/60 seconds) are combined, which can lead to some instability with recordings of rapidly moving objects. Field 1 or Field 2 playback shows the respective field only, resulting in stable reproduction also of picture details.

Note on still picture playback

To protect the tape, still picture playback is automatically switched to the next frame after about 7 minutes.

Daily check routine

Perform the following checks before starting to record.

1 Turn on the camera, monitor, and EVT-801.
2 Confirm that the picture from the camera is shown on the monitor.
3 Confirm that the date and time display on the monitor is correct.
To check the recording condition of the previous day.
4 Rewind the tape for a few tape counter digits and set the unit to playback.
5 Confirm that playback is normal.
6 Confirm that recorded date and time information is correct.

If any malfunction is detected, switch all units off, pull the plug from the AC outlet, and consult your Sony dealer.

Video head cleaning

After prolonged use, the video heads may become contaminated, which results in impaired picture quality (snow) or loss of picture. To avoid this, head cleaning should be performed regularly.
Use the optional cleaning tape V8-25CL or have your Sony dealer perform cleaning.

Video head cleaning

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How to use the supplied Cleaning Cassette

Clean the video head as follows.

1 Insert the cleaning cassette.
2 Press the ▶ button.
3 After about 15 seconds press the ■/⏏ button and remove the cassette without rewinding.
4 Review the picture by recording and playing back with the EVT-801.

Repeat the above procedure as required.
Avoid continuous use of more than 5 times.

Video head life

Like the pickup of a record player, video heads do not last indefinitely. If optimum picture quality is not restored even after cleaning, head replacement may be necessary. Please consult your Sony dealer.

Periodic servicing

To maintain optimum operating conditions and picture quality, regular servicing (cleaning, lubrication, parts replacement) should be performed about once every 1000 hours of use. Please consult your Sony dealer.
If the unit is to be used for critical monitoring purposes, it may be preferable to perform servicing at shorter intervals.

Extended non-use periods

When not used for long periods, the unit should be switched on now and then and set to the playback mode for about 3 minutes. This helps to prevent mechanical deterioration.

System

Video recording system
Rotary 2-head helical scan
Video signal NTSC black-and-white, EIA standard
Usable cassette 8 mm video format cassette
Maximum recording time
384 hours (recording interval 8 sec., with Sony P6-90 cassette)
Fast-forward/rewind time
Approx. 3 min. (with Sony P6-90 cassette)

Inputs and outputs

Video input BNC connector
Input signal: 1 Vp-p, 75 ohms, unbalanced, sync negative
Video output BNC connector
Output signal: 1 Vp-p, 75 ohms, unbalanced, sync negative

General

Power requirements
120 V AC, 60 Hz
Power consumption
27 W
Operating temperature
5°C to 40°C (41°F to 104°F)
Storage temperature
−20°C to +60°C (−4°F to 140°F)
Dimensions 355 × 86 × 340 mm (w/h/d)
(14 × 3 1/2 × 13 1/2 inches)
Weight Approx. 6.3 kg (13 lbs 14 oz)
Supplied accessory
Cleaning Cassette (1)

Design and specifications subject to change without notice.

	Symptom	Check
	No power.	• Power cord properly plugged into AC outlet?
	No picture on monitor.	• Monitor and video camera switched on? • Connections properly established? • Connecting cords firmly plugged in?
	Poor picture quality on monitor.	• Video camera focussed properly?
	"*" is shown instead of date and time indication after power failure of less than 72 hours.	• Internal backup battery was not fully charged. Unit should be left on for about 40 hours for a full charge.
Recording	Cannot record.	• Record prevention tab of cassette set to inhibit recording? • If TAPE END indicator is lit, tape must be rewound to the beginning by pressing the ◀◀/⏮ button.
Recording	Repeat recording not possible.	• REPEAT REC switch set to "OFF"? (should be ON) • ■/⏏ or other button was pressed during automatic rewind? • Repeat recording is disabled if alarm recording was carried out (to prevent erasure of alarm recording section).
Recording	Alarm recording not possible.	• Alarm sensor properly connected? • ALARM REC switch set to "OFF"? (should be ON) • Unit must be set to the regular recording mode to permit alarm recording. Triggering alarm recording from the stop mode is not possible.
Recording	Timer recording not possible.	• EXT TIMER REC switch set to "OFF"? (should be ON) • Cassette properly inserted? Record prevention tab of cassette set to permit recording? • Power failure has occurred?
Playback	Poor playback picture quality (noise or snow).	• Video head contaminated? Perform cleaning with supplied cleaning cassette. If picture does not improve after cleaning, head replacement may be necessary. Consult your Sony dealer.
Playback	No date and time display on playback picture.	• DISPLAY switch was not set to "L" or "R" during recording.